

WHAT IS CLAIMED IS:

1        1. A telecommunications platform comprising:  
2            a cluster of processors which collectively perform a platform processing  
3            function, plural processors of the cluster having Internet Protocol (IP) capabilities and  
4            respective plural IP interfaces;

5            an Internet Protocol (IP) handler distributed throughout the cluster whereby the  
6            plural processors have a same IP address, the Internet Protocol (IP) handler forwarding  
7            IP frames received from outside the platform on any of the plural IP interfaces and  
8            addressed to the same IP address to a correct one of the plural processors executing an  
9            IP software application.

1        2. The apparatus of claim 1, wherein the Internet Protocol (IP) handler  
2            comprises:

3            a router hosted by at least one of the processors of the cluster;  
4            an interface interconnect which interconnects the plural IP interfaces to the  
5            router and passes IP frames incoming to the platform to the router regardless of which  
6            of the plural IP interfaces receives the frames; and

7            a socket comprising:

8            an active socket central part hosted by the at least one of the processors of  
9            the cluster that hosts the router, the active socket central part being connected to the  
10          router;

11            a socket distributed part hosted by the one of the processors of the cluster  
12            executing the internet protocol (IP) software application;

13            wherein the active socket central part determines that the IP frames  
14            incoming to the platform are destined to the one of the plural processors of the cluster  
15            executing the internet protocol (IP) software application and forwards the IP frames to  
16            the socket distributed part, and wherein the internet protocol (IP) software application  
17            receives the IP frames from the socket distributed part.

1        3. The apparatus of claim 2, wherein the plural processors of the cluster are  
2            connected to respective plural IP interfaces of a first type; and wherein the platform  
3            further comprises an IP interface of a second type, the IP interface of the second type  
4            being connected to the router.

1       4. The apparatus of claim 3, wherein the IP interface of the first type is an  
2       Ethernet interface and wherein the IP interface of the second type is an ATM interface.

1       5. The apparatus of claim 2, wherein the interface interconnect comprises:  
2            an interface interconnect central part hosted by the at least one of the processors  
3            of the cluster that hosts the router; and  
4            an interface interconnect distributed part hosted by the one of the processors of  
5            the cluster that executes the internet protocol (IP) software application.

1       6. The apparatus of claim 2, further comprising:  
2            a standby router hosted by another processor of the cluster;  
3            a standby socket central part hosted by the another processor of the cluster;  
4            whereupon occurrence of a predetermined event, the standby router assumes the  
5            functions of the router and the standby socket central part becomes the active socket  
6            central part.

7  
8       7. The apparatus of claim 6, wherein the predetermined event is failure of the at  
9       least one of the processors of the cluster that hosts the router.

1       8. A method of operating a telecommunications platform, the method  
2       comprising:  
3            using a cluster of processors to perform collectively a platform processing  
4            function;  
5            providing plural processors of the cluster with Internet Protocol (IP) capabilities  
6            and respective plural IP interfaces;  
7            using a same IP address for each of the plural processors of the cluster;  
8            forwarding IP frames received from outside the platform on any of the plural IP  
9            interfaces and addressed to the same IP address to a correct one of the plural processors  
10          executing an IP software application.

1       9. The method of claim 8, further comprising:  
2            passing IP frames incoming to the platform to a router regardless of which of the  
3            plural IP interfaces receives the frames, the router being hosted by one of the plural  
4            processors of the cluster;

5 using the router to route the IP frames to an active socket central part;  
6 determining at the active socket central part that the IP frames incoming to the  
7 platform are destined to the one of the plural processors of the cluster executing the  
8 internet protocol (IP) software application;  
9 forwarding the IP frames to a socket distributed part hosted by the one of the  
10 plural processors of the cluster executing the internet protocol (IP) software application;  
11 receiving the IP frames at the internet protocol (IP) software application from the  
12 socket distributed part.

1 10. The method of claim 9, further comprising:  
2 connecting the plural processors of the cluster to respective plural IP interfaces  
3 of a first type; and  
4 connecting the router to an IP interface of a second type.

1 11. The method of claim 10, wherein the IP interface of the first type is an  
2 Ethernet interface and wherein the IP interface of the second type is an ATM interface.

1 12. The method of claim 9, further comprising:  
2 routing IP frames received at any of the plural IP interfaces via an interface  
3 interconnect distributed part to an interface interconnect central part, the interface  
4 interconnect central part being hosted by a same processor which hosts the router; and  
5 routing the IP frames from the interface interconnect central part to the router,  
6 the interface interconnect central part being hosted by a same processor which executes  
7 the internet protocol (IP) software application.

1 13. The method of claim 9, further comprising:  
2 detecting the occurrence of a predetermined condition; and then  
3 activating a standby router hosted by another processor of the cluster;  
4 rendering as active a standby socket central part hosted by the another processor  
5 of the cluster;  
6 the standby router assuming the functions of the router and the socket inactive  
7 central part becoming the active socket central part.

1        14. A telecommunications platform comprising:

2            a cluster of processors which collectively perform a platform processing  
3            function, plural processors of the cluster having Internet Protocol (IP) capabilities and  
4            respective plural IP interfaces, the plural processors of the cluster all having a same IP  
5            address;

6            an Internet Protocol (IP) handler distributed throughout the cluster which renders  
7            the IP interfaces of the plural processors of the cluster exchangeable whereby  
8            knowledge of which one of the plural processors of the cluster is hosting an IP software  
9            application being accessed is unnecessary when selecting one of the plural IP interfaces  
10           for connecting to the cluster.

1        15. The apparatus of claim 14, wherein the Internet Protocol (IP) handler  
2           comprises:

3            a router hosted by at least one of the processors of the cluster;

4            an interface interconnect which interconnects the plural IP interfaces to the  
5            router and passes IP frames incoming to the platform to the router regardless of which  
6            of the plural IP interfaces receives the frames; and

7            a socket comprising:

8            an active socket central part hosted by the at least one of the processors of  
9            the cluster that hosts the router, the active socket central part being connected to the  
10           router;

11            a socket distributed part hosted by the one of the processors of the cluster  
12            executing the internet protocol (IP) software application;

13            wherein the active socket central part determines that the IP frames  
14            incoming to the platform are destined to the one of the plural processors of the cluster  
15            executing the internet protocol (IP) software application and forwards the IP frames to  
16            the socket distributed part, and wherein the internet protocol (IP) software application  
17            receives the IP frames from the socket distributed part.

1        16. The apparatus of claim 15, wherein the plural processors of the cluster are  
2            connected to respective plural IP interfaces of a first type; and wherein the platform  
3            further comprises an IP interface of a second type, the IP interface of the second type  
4            being connected to the router.

1       17. The apparatus of claim 16, wherein the IP interface of the first type is an  
2       Ethernet interface and wherein the IP interface of the second type is an ATM interface.

1       18. The apparatus of claim 15, wherein the interface interconnect comprises:  
2            an interface interconnect central part hosted by the at least one of the processors  
3            of the cluster that hosts the router; and  
4            an interface interconnect distributed part hosted by the one of the processors of  
5            the cluster that executes the internet protocol (IP) software application.

1       19. The apparatus of claim 15, further comprising:  
2            a standby router hosted by another processor of the cluster;  
3            a standby socket central part hosted by the another processor of the cluster;  
4            whereupon occurrence of a predetermined event, the standby router assumes the  
5            functions of the router and the standby socket central part becomes the active socket  
6            central part.

1       20. The apparatus of claim 19, wherein the predetermined event is failure of the  
2       at least one of the processors of the cluster that hosts the router.